

#19

$$P = mV$$
$$P = \uparrow \text{same}$$

① has largest mass.  
therefore has largest "P"

#20

$$m = 10 \text{ kg}$$

$$P = ?$$

$$V = 3.5 \text{ m/s} \rightarrow$$

$$P = mV$$

$$(10 \text{ kg})(3.5 \text{ m/s} \rightarrow)$$
$$= 35 \text{ kg m/s Right}$$

①

$$\#2 \quad p_B = p_A = 35 \text{ kg m/s} \rightarrow$$

$$v_B = ?$$

$$m_B = 2 \text{ kg}$$

$$p = m v$$

$$\frac{35 \text{ kg m/s} \rightarrow}{2 \text{ kg}} = \frac{2 \text{ kg } v}{2 \text{ kg}}$$

$$17.5 \text{ m/s} = v \quad \textcircled{C}$$

←

22.  $m = .4 \text{ kg}$   
 $\Delta P = 12 \text{ kg m/s} \rightarrow$

$F = 40 \text{ N} \rightarrow$

$\Delta t = ?$

$\Delta P = F \Delta t$

$\Delta P = m \Delta v$

$\Delta v = v_f - v_i$

$$\frac{12 \text{ kg m/s} \cancel{s}}{40 \text{ N} \cancel{s}} = \frac{40 \text{ N} (\Delta t)}{40 \text{ N}}$$
$$\frac{12}{40} = .3 \text{ s}$$

(A)

$$\#23 \quad v_i = 0$$

$$v_f = ?$$

$$\Delta v = ?$$

$$\Delta p = m \Delta v$$

$$\frac{12 \text{ kg m/s} = .4 \text{ kg } (\Delta v)}{.4 \text{ kg}} \quad \frac{.4 \text{ kg}}{.4 \text{ kg}}$$

$$30 \text{ m/s} = \Delta v$$

$$\Delta v = v_f - v_i$$

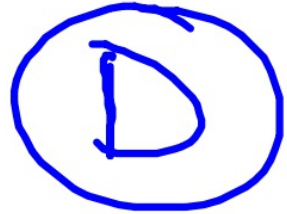
$$30 \text{ m/s} = v_f - 0$$



24.



25 =



ALL FORCES

26. E

27. E

28. E

29. I

30. I

31. is TRUE

32. is False

33. is TRUE

34. False

F TorF

F.

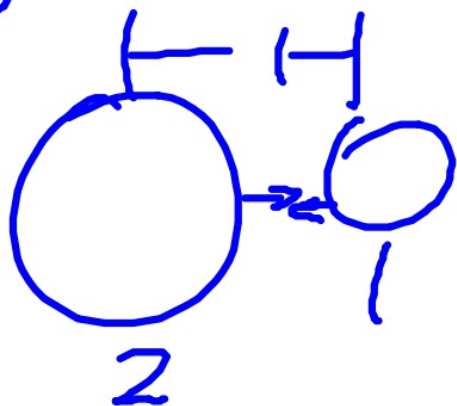
(A)

P ~~→~~ = P  
before after

NOT Huge P. because  
NO velocity



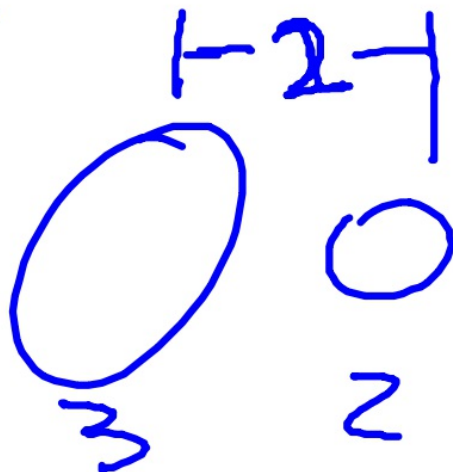
$$35 \quad F \propto \frac{m_1 m_2}{d^2}$$



$$\frac{2 \times 1}{1^2} = \frac{2}{1}$$

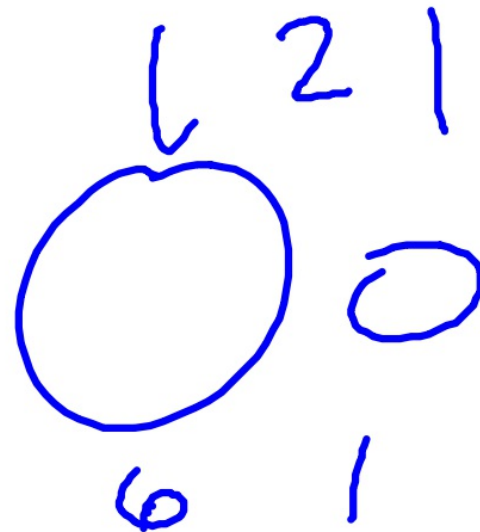
2 N

(A)



$$\frac{3 \times 2}{2^2} = \frac{6}{4}$$

1.5 N



$$\frac{6 \times 1}{2^2} = \frac{6}{4}$$

1.5 N

